

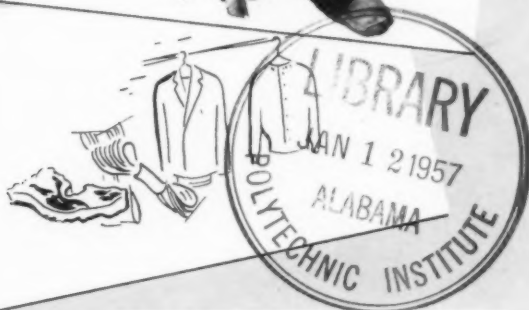
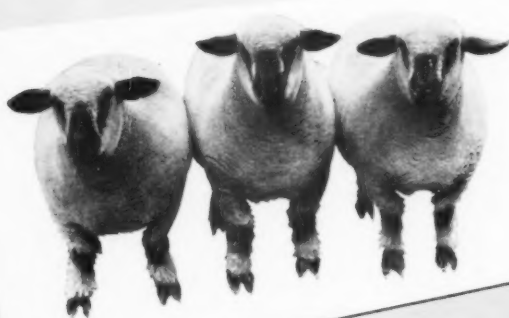
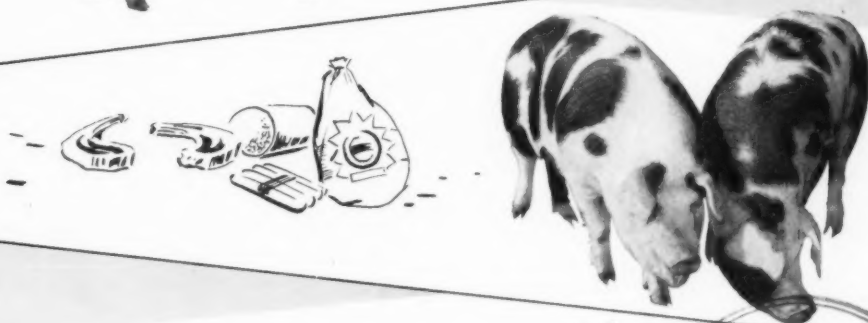
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JANUARY 1957

AGRICULTURAL MARKETING



IN THIS ISSUE

Trends in marketing costs
Use of trading stamps in marketing food
Food transportation and what it costs us

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Cover

All of the livestock on our cover, with the notable exception of the hogs, appear to show an interest in the outlook for 1957. The hogs, in typical fashion, are neither concerned with the short term outlook nor the longer term outlook. They are more attentive to their immediate prospects. Whatever your interests may be—long term, short term, or immediate prospects—you can get much valuable material on agricultural marketing from the 34th Annual Agricultural Outlook Conference held recently in Washington. Printed material on the conference and other outlook reports can be obtained from the Office of Information, U. S. Department of Agriculture, Washington 25, D. C.

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Editor (acting) Milton Hoffman

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THREE-LANE SORTER

for small fruits and vegetables

By Theodore H. Allegri

A simple device, which divides a conveyor belt into lanes, makes it easier for operators in vegetable and fruit processing plants to sort and grade a variety of products. It concentrates the attention of the sorter in a smaller area and permits more effective sorting.

The device was designed by the author, formerly of Agricultural Marketing Service's Transportation and Facilities Branch. It divides the usual 24-inch wide conveyor belt into three 8-inch lanes. The belt itself is not changed. The portable divider simply fits on the troughs edging the belt.

This divider may be made from 1- to 2-inch wide steel strap, as illustrated, or from scrap sheet metal. Where small fruits and vegetables are being sorted on several different conveyor belts, the length of the dividers should be made to accommodate the shortest belt used. Thus, the divider may be used interchangeably with short and long conveyor belts. When the divider is removed, the belt may be used at its full width for more bulky items.

The sorting device proved efficient in several plants where it was tested. In fact, some plants using the divider reduced labor costs up to 50 percent. At the same time, they accomplished a higher degree of quality control than when a 24-inch wide belt was used for the sorting operations.

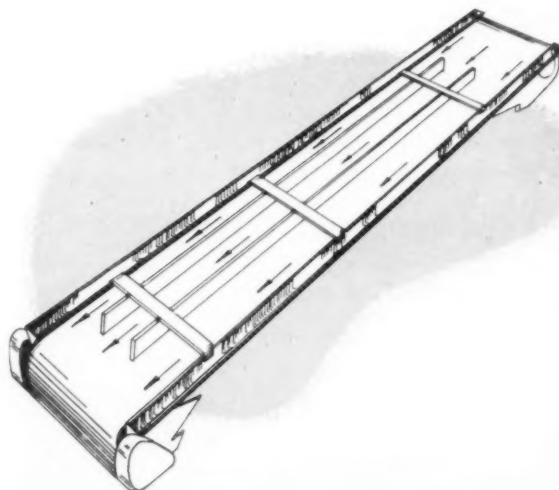
The 3-lane divider offers four definite advantages: (1) It concentrates the attention of the sorter upon a smaller area, thereby increasing the effectiveness of sorting. (2) It permits the belt to run at a higher speed, preventing stratification of the product and eliminating pile-ups. (3) It does away with interference, or overlap, of one sorter with another on the production line. (4) Fewer operators—only one for each lane—are required at each sorting table. However, additional helpers may be needed to sort poor quality products.

The 3-lane sorter is particularly helpful in sorting small fruits and vegetables—peas, beans, and berries. It can also be used, in a modified form, for larger produce.

To sort asparagus, for example, the author simply designed a 2- rather than 3-lane divider. This more easily accommodated the longer asparagus spears. With a dividing head to deflect the spears into the 2 lanes, it was more effective than the former method.

Indeed, the plant using the divider for asparagus was able to reduce its sorting labor from 40 to 25 persons—and with increased efficiency.

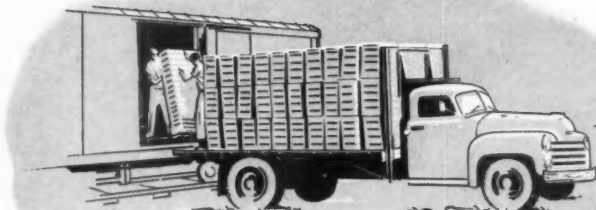
But whether it's 2 or 3 lanes wide, the divider proves to be a good way to cut labor costs and increase sorting efficiency. The material and labor cost for building the dividers is easily regained within a few production-hours.



3-lane sorter easily fits on the edges of conveyor belt.

FOOD TRANSPORTATION and what it costs us

By Celia Sperling



OUT of every dollar you spend for food at the retail store, more than 8 cents goes for transportation. It costs 8 cents to bring farm-grown produce from the country to the wholesaler and something more to deliver it to the retailer.

Compare this with the 5.5 cents per dollar you spent for food transportation just 10 years ago and you get a picture of current transportation costs.

Of course, the price of the food itself has risen, too. And marketing is costing us an ever larger part of the food dollar. But transportation's share has been growing even faster than the share of other marketing services.

The increase in the transportation portion of your food dollar reflects a sizable increase in the total transportation bill for food. This bill is now more than 2½ times what it was 10 years ago.

Why the transportation bill rose so much in such a short time is brought out in a recent study made by the Agricultural Marketing Service. Specialists in the Transportation and Facilities Branch can see three significant factors contributing to this increase.

- More food is being shipped to market to feed our growing population.

- Fresh fruits and vegetables are being hauled longer distances.

- The railroads have been granted several general rate increases in the past 10 years, and truck rates probably have increased accordingly.

Today, the housewife's purchases of fresh produce are no longer limited to "in season" fruits and vegetables. With the increasing speed of truck and rail transportation and improvements in refrigeration techniques, fresh produce is available almost the year around. When the growing season in one producing area ends, the market draws on another area.

One impressive example of this extension of transportation lines is the increased distance potatoes are hauled to New York City. During 1941 the average distance from all the growing areas tapped by this market was 550 miles. By 1955 this average haul was up to 856 miles—an increase of 56 percent.

An even greater increase can be seen in the average distance that celery moved to the Chicago market. Between 1941 and 1955 the distance rose 67 percent—from 836 miles to 1,400 miles.

Greater hauling distances and increased volume naturally raise total shipping charges. This is true even when transportation rates remain constant.

But railroads have been granted a number of general rate increases in the past 10 years. The hauling charges for agricultural products have risen an average of nearly 71 percent over 1945 rates.

This is still less than the increases authorized by the Interstate Commerce Commission for all commodities (89 percent).

"Hold-down" provisions on specific agricultural commodities get much of the credit for these smaller rate raises. This is because hold-downs impose a dollars-and-cents limitation on the rate increase allowed

CHANGES IN LAST DECADE

TRANSPORTATION PORTION

Of The Retail Food Dollar



Of The Marketing Dollar



for a particular commodity regardless of the distance it moves.

Railroads, though, are not the only transportation units with higher rates. Barge lines and various boat lines operating within the United States have also been granted rate increases. And whenever barge and train rates go up, truck rates also tend to rise.

Many truckers of livestock, farm produce, and other agricultural commodities are free of Government economic control and are not required to publish their rates. So it is difficult to make a specific statement concerning the overall increase in trucking charges.

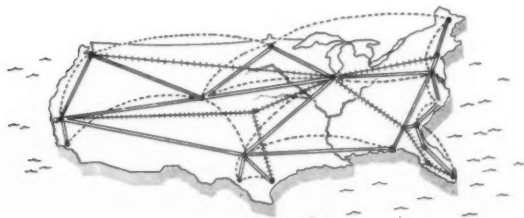
During the past decade, increasing numbers of producers and handlers have turned to truck transportation to bring their products to market. Between the growing season 1946-47 and 1954-55, the total amount of produce shipped by truck from Florida, one of the chief fruit-and-vegetable-producing States, more than quadrupled. Rail shipments remained relatively stable.

Trucks are becoming more and more important in long distance transportation. This is true not only for fruits and vegetables, but also for dairy products, livestock, poultry, and eggs.

Improvements in highways and equipment have allowed truckers to offer competitive rates with the railroads and to provide many extras besides. Faster over-the-road service and door-to-door delivery are outstanding features of truck transportation.

The trucks' reduced handling and faster movement not only means economy for the shipper but also less spoilage of his product. Also, the greater speed gives the shipper an opportunity to take advantage of a favorable market.

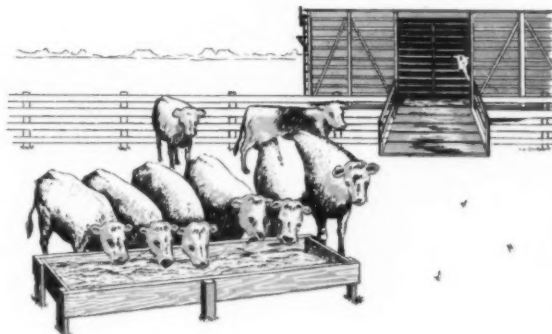
Railroads have countered by speeding up the movement of refrigerator cars. They also are experimenting with hauling fresh and frozen foods by means of a piggyback service—carrying truck trailers on flatcars.



Transportation network stretches from north, south, east, west.

But whatever the method of transportation—truck, train, or barge—costs are up. And for transporting the highly popular frozen foods, they are up even more. Frozen foods require expensive mechanical or dry-ice refrigeration. This, too, must be covered by the transportation bill.

In addition to refrigeration, there are many other extra services included in the cost of transportation. Some of these are precooling, ventilating, and heating produce; diversion and reconsignment of shipment to take advantage of a favorable market; stopping to rest, feed, and water livestock in transit.



For some, the charge is stated separately; for others, it is included in the basic rate for hauling. But regardless of how they are priced, all are essential in bringing farm foods to market quickly and in good condition.

In 1955 the estimated transportation bill for farm-grown goods amounted to 3.7 billion dollars. It accounted for 13 percent of the marketing portion of the food bill.

What the relationship between retail food costs and the price of transportation will be in the future is hard to predict. It is likely that there will be more processing and other related marketing services as time goes on. This would tend to increase the share of the food dollar going to marketing services other than transportation.

It is also likely that transportation charges will continue to rise and carry the transportation portion of the food dollar to a new high.

Whichever way the cost of transportation goes, because of the tightly interwoven pattern of marketing costs, a change in the charge for any one service alters the distribution of the food dollar.

Use of Trading Stamps

in Marketing Food

By L. D. Howell



Research specialists of the Agricultural Marketing Service are making a study on the use of trading stamps in retail stores to see what effect the stamps have on the costs and prices of foods.

They want to learn, among other things, whether consumers are shifting some of their food expenditures to the nonfood items "purchased" when trading stamps are redeemed.

As the initial part of this study, USDA has released a report on food trading stamps, based mainly on the best, but limited, information available from non-government sources, including industry studies.

The report shows that almost half the families in the United States are collecting trading stamps for later redemption at "premium stores." In 1956, the trading stamp business covered over \$30,000,000,000 worth of goods and services. Its stamp premiums totaled more than a \$1,000,000,000 in retail value.

The growth of the program has been phenomenal. Although most people can't remember as far back as 1890, that's when retailers first began to use trading stamps as a promotional device to attract and hold customers.

It wasn't until 1950 that the stamps actually took hold. Then their popularity spread rapidly, until today some 400 to 500 companies provide stamps to retailers of all types. It is estimated that these stamps and the publicity service that goes with them cost more than \$600,000,000 annually.

There are many ways in which the stamp plans can be handled—by stamp companies, by cooperative stamp companies, by individual store plans, or by cash register tapes. Generally, the plan is this.

A stamp company provides the retailer—only one of a given type in each trade territory—with stamps, advertising materials, and promotional aids. Supplies include books in which to save the stamps and premium merchandise catalogs. Premiums are also furnished by the company.

For all this the stamp company charges the retailers from \$2 to \$3 per 1,000 stamps. These stamps are distributed to the customer at the rate of one for each 10 cents of purchases. Occasionally, on a bonus day, 2 or more stamps are given for each dime spent.

Customers paste these stamps in books holding about 1,200 to 1,500 stamps. When filled, the books are worth from \$2 to \$4.50 each in terms of the retail prices of the premiums offered.

Representatives of stamp companies refer to these returns to customers as a "bonus for paying cash," "interest on the money you spend," "equivalent to cash in your pocket," or "a reward for patronage."

But all these "pluses" for the customer do not come without cost to the retailer. Not only does he pay for the stamp program itself, but handling the stamps involves additional operating expenses.

A recent national survey indicates that about three-fourths of the supermarkets (with annual sales of \$375,000 or more) and four-fifths of the superettes (with an annual sales of \$75,000 to \$375,000) found that the use of trading stamps increased their expenses. Less than 10 percent were able to absorb the added costs through increases in sales volume.

Often trading stamps can be financed by a reduction of other promotional schemes—such as advertising, low-price specials, coupons, or cash discounts. The

above survey showed that 43.5 percent of the supermarkets and superettes used fewer "specials" after beginning stamp plans. About 38 percent reduced their advertising. One-eighth, however, could not offset the additional costs of trading stamps.

The survey data indicate that net earnings dropped in 49.1 percent of the supermarkets and superettes using stamps. Only 30.7 percent increased their returns, and 20.2 percent reported no change.

At this time it is not known to what extent these developments are attributable to the use of the stamps.

Do grocery stores have to boost the retail price of food products to help carry the cost of handling stamps? Here, opinions differ widely.

Competition is such that retailers are reluctant to increase prices. One retailer in analyzing his stamp costs reported that if these costs were passed on to consumers, a price rise of 4 percent would be necessary. Some salesmen of stamps indicate that sooner or later a price rise is usually necessary. Others say "retailers should not have to raise prices" and "stamps pay for themselves by increasing business."

Increases in volume of sales attributed to the use of trading stamps have apparently ranged from little or none to 100 percent or more in some stores. For some stores, sizable increases in the volume of sales have been reported after the introduction of stamps.

The degree of this increase seems to vary with the kind of store, merchandising methods, promotional practices associated with use of trading stamps, and competitive devices of other nearby stores.

A survey in Minneapolis showed that grocery stores using trading stamps increased their weekly volume an average of 41.2 percent from early 1953 to December 1954. The sales volume in stores not using stamps rose only 8.1 percent. During this same period, it was found that 121 stamp stores in 5 cities showed increases in sales averaging 34.2 percent.

Interestingly enough, a 1954 survey of 64,400 Denver families who bought most of their groceries at stores giving stamps showed that relatively few of them (2.6 percent) patronized these stores principally for the stamps. Fourteen percent, however, mentioned that the stamps were *one* of the reasons for going to the particular grocery store.

Nonetheless, sales increases were reported by 30 percent of the supermarkets and 56 percent of the superettes contacted in a 1956 survey. The increases for supermarkets averaged 21.3 percent. Superette increases averaged 18 percent.

Operators of 85 percent of the 304 stores in the survey were competing with other operators also giving

out trading stamps. No small stores were included. But an annual survey of the food trade indicates that average volume of sales of small stores using trading stamps declined 1.8 percent in 1955.

Comparing the first half of 1955 with the first half of 1956, supermarkets giving stamps boosted their sales volume an average of 10.2 percent; stores not giving trading stamps went up 6.7 percent. For superettes, the increases averaged 9.5 and 3.9 percent, respectively. For small stores as a group, the survey showed a decrease in volume of sales.

Retailers facing loss of business to competitors who use trading stamps may seek to protect their competitive position by using trading stamps themselves or expanding other forms of sales promotion. In such a case, both groups of retailers would be required to pay the added costs of such promotional activities without obtaining commensurate benefits in the form of increased sales.

This could lead to further increases in various types of promotional expenditures by retailers to maintain or strengthen their competitive position. Under such conditions the total cost of retailing food products would be increased unless the added promotional costs could be offset in some other way. Should total marketing costs be increased by such promotional activities, retailers would have to raise prices, accept lower profits, suffer a loss, or reduce prices paid to farmers.

Many customers are willing to pay more for food with stamps than for food alone. If prices of food with stamps were raised above prices of food alone by amounts equal to the average value of the stamps to consumers, purchasers of food as a group would be about as well off with as without stamps. However, consumers who attach relatively little value to the stamps would pay relatively more and those who value them above the average would pay less than the stamps are considered to be worth.

The value of trading stamps to many patrons is less than the cost of the stamps to retailers. If price of food plus stamps were increased by enough to offset the additional costs of the stamps to retailers the increases would be greater than the cash value of the stamps to consumers. Unless the differences between these costs and values are offset by other factors, costs to retailers and consumers of food as a group would exceed the value of stamps to food purchasers.

This is the situation as seen by USDA researchers who reviewed and analyzed currently available information. It is but the first step toward comprehensive research on the use of trading stamps in retailing food. Other, more detailed, reports will follow.

CUTTING LABOR COSTS IN GROCERY WAREHOUSES

By John C. Bouma

Improved handling methods suggested by Agricultural Marketing Service specialists meant a saving of nearly 17 percent in the number of man-hours required to operate 15 grocery warehouses. Savings were gained through improved work methods, better materials-handling equipment, improved physical layouts, and more nearly balanced work crews.

Further savings can be expected with the installation of new equipment and construction of new facilities. In fact, an additional 24 percent—for a total saving of 41 percent—will be possible after new facilities and equipment are completed in 8 firms and new equipment installed in 3 others.

All these labor reductions stem from suggestions made by researchers in the Transportation and Facilities Branch who conducted an intensive study of 15 warehouses and their operating procedures. The study initially covered more than 75 warehouses in various parts of the country. General observations of warehousing methods were made in all of these.

Since labor accounts for more than 50 percent of wholesale grocery warehousing costs, methods of in-

creasing labor productivity are of major concern to warehouse management. Labor is also an important factor in food marketing costs.

Man-hours required in the receiving operation were reduced by separating the palletizing operation from the storing operation, improving crew balance, and reducing the number of workers assigned to a job.

Separating the palletizing and storing operations saved many man-hours simply by eliminating waiting time caused by the combined operations. Previously, the palletizing crew had to wait for a forklift to remove the merchandise to storage, and the forklift operator had to wait while the merchandise was being palletized. Under the new arrangement, the two crews work independently, each with its own pallet jack, skid, or 4-wheel handtruck.

Improving the crew balance in receiving merchandise by conveyors saves more man-hours. One firm reduced its total receiving time 13 percent or 40 man-hours per week. In another, a saving was accomplished by having 1 man place merchandise on the conveyor line and 3 men stack in the warehouse rather than having 2 men on the line and 2 men stacking.

Similarly, it proved more productive to have one man instead of a 2-man team palletizing groceries. Nearly 38 percent more work was handled this way.

The systems of order assembly and the types of materials-handling equipment varied widely in the three warehouse structures. Order fillers handled anywhere from 57 to 182 cases per man-hour on comparable size orders and travel distances.

In the assembly of individual retailer orders, many man-hours can be saved by using the right materials-handling equipment. Included in the equipment used for order assembly in the 15 firms under study were 2- and 4-wheel handtrucks, small gasoline and electric tractors, remote-controlled order filler tractors, elevators, and conveyor lines.

By replacing 2-wheel handtrucks with 4-wheelers, 37

Conveyors move merchandise into position for stacking operation.





Warehouse equipped with conveyor line for handling merchandise

percent more orders were handled in the assembly process. Travel time was similarly cut by using a small gasoline or electric tractor to tow 4-wheel warehouse trucks. This reduction came to 42 percent over hand-pushing when order fillers traveled 1,500 feet in assembling a 30-case order. An additional 20 percent travel time was saved by using remote-control units on small electric tractors.

In addition to materials-handling equipment, order size has a direct influence on order filler production. For example, on orders of 1 to 10 cases, the slot system and tow tractors averaged 48 cases per man-hour. But on orders of 150 to 200 cases this average was 4 times greater, or 192 cases per man-hour.

As in the receiving operation, delay again figures prominently in order filler productivity. These man-hour losses become significant when they are repeated over and over again.

Common causes of excessive order filler delay are: (1) Waiting for selector trucks because all are loaded, (2) waiting for retailer orders to be processed, (3) waiting for a forklift to lower inaccessible merchandise or to bring merchandise from reserve storage, (4) hunting for a particular item, (5) doubling back over the same route traveled in the assembly process, (6) waiting because of blocked aisles, and (7) waiting for a conveyor line to be cleared.

Reduction of these delays meant a weekly saving of more than 1,000 man-hours—nearly 16 percent of the order assembly time.

Again, in the checking operation, researchers were able to offer suggestions that resulted in considerable saving. Four firms reduced checking labor 50 percent by having order fillers place the first half of the items on one side of the 4-wheel selector truck and the remaining half on the other side, then having 1 instead of 2 men check the order. Another firm halved the cost of this operation by sample checking.

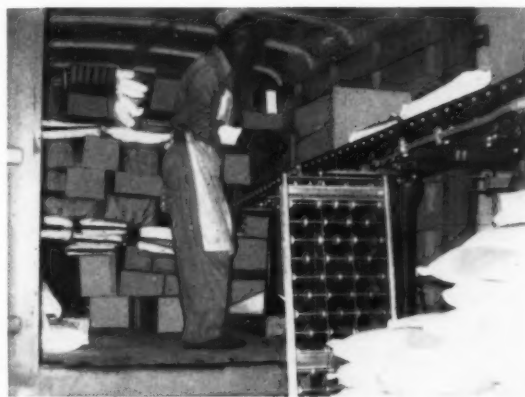
Improved crew balance and elimination of duplicate checking of assembled orders cut checking man-hours in 3 other firms. In all, checking labor was reduced one-third after USDA recommendations were adopted.

In the final warehousing operation, loading the delivery trucks, it was found that 1 man could handle approximately a third more cases per man-hour than 2 men working as a team. Loading man-hours in 7 firms were reduced nearly 27 percent with the use of 1 man instead of 2-man teams and with the improved scheduling of work crews.

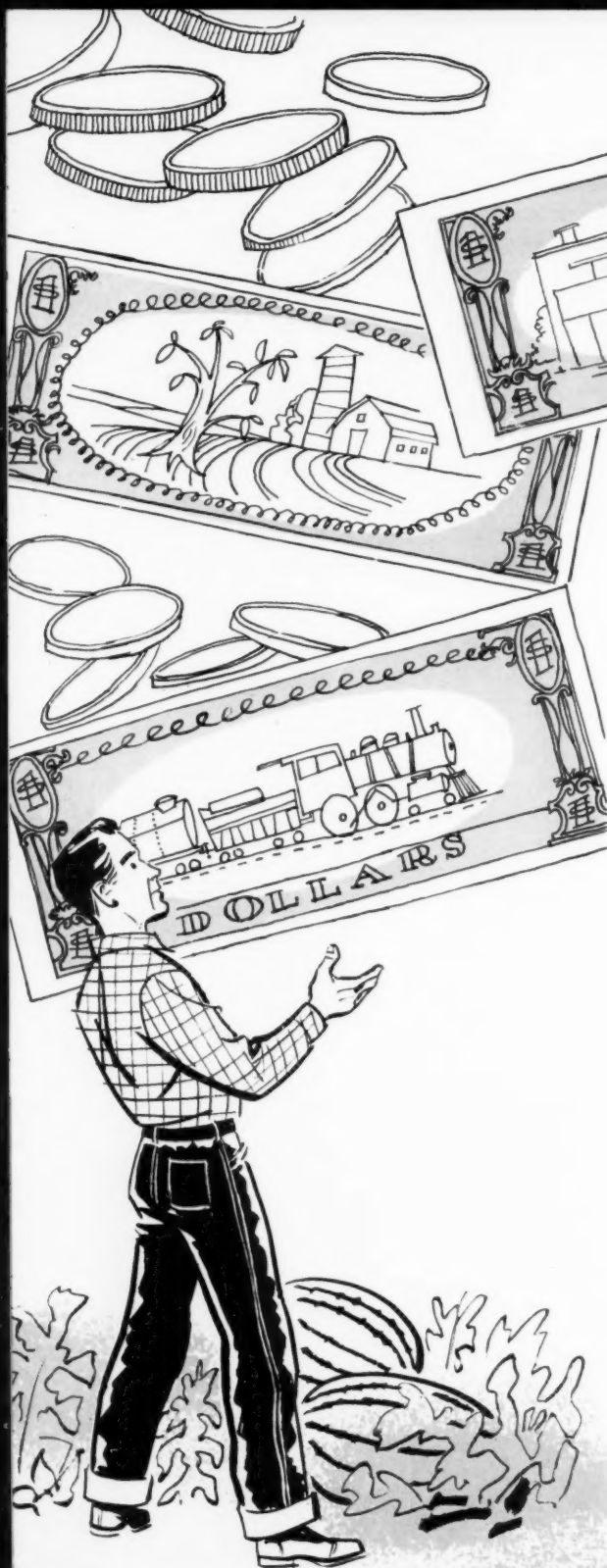
Productivity of truck loaders was nearly 26 percent, or 145 cases per man-hour, greater with a conveyor extended into the delivery truck than when loading from 4-wheel warehouse trucks.

Obviously, all these savings are important to the wholesale grocer's warehousing operation. Labor costs must be closely watched and equipment effectively used to have an economical warehousing operation.

Two publications giving more detailed accounts of the warehousing operations described here are available from the Office of Information, USDA. They are: MRR 94, "Methods of Increasing Productivity in Modern Grocery Warehouses," and MRR 142, "Methods of Increasing Labor Productivity in Multistory and Small One-Floor Grocery Warehouses."



One man proved more efficient in loading delivery truck than a 2-man team. Here conveyor moves the merchandise into truck.



Who gets

By Philip L. Breakiron

MORE than one-half million dollars a year can be saved if watermelon shippers will change their method of loading in railroad cars. This was brought out in a recent study on shipping watermelons.

Who will get these savings? Will it be the marketing people alone? Or will the farmers and consumers also benefit? A closer look at the watermelon shipping research will give us the answer.

In 1953, the Marketing Research Division, Agricultural Marketing Service, tackled the problem of excessive damage to watermelons in rail transit. For years, the shippers loaded the melons lengthwise in railroad cars. Although there was considerable loss and damage, it was not acute. But, the recent introduction of new long-type melon varieties added to the problem. These melons — which reduce producers' losses from disease and are more productive and palatable — are more vulnerable to damage in transit.

They have a thin, weak rind at the blossom end. This makes for damage three times as high as it was in the melons they replaced.

Researchers conducted a number of shipping experiments during the 1953 and 1954 seasons. Observations were made on melons shipped from Florida, Georgia, and South Carolina to northern markets.

These melons, like all others, were bulk loaded in the cars. The car, in effect, is the melon's container. So this makes them subject to the full force of any impact transmitted to the car.

In the conventional lengthwise load the melons take the impact at the ends. Faced with the problem of weaker ends in the new melons — researchers developed the



crosswise load. In this method, the impact is taken on the melon sides, spreading it over a greater surface of thicker and stronger rind.

The crosswise load has reduced damage remarkably. Great reductions were found in melon bruising, cracking, and surface scarring. The overall reduction in external damage was 70 percent.

Initially, the railroads will benefit from these savings just as they initially had to bear increased cost of the shipping damage. Decreasing the amount of damage to the melons reduces the amount of claims the railroads must pay. In recent years, these claims for watermelons have been increasing. In 1947, they averaged about \$30 a car, over \$993,000 for the year. By 1955, they doubled to about \$60 per car, or \$1,500,000 for the year.

One of the largest railroads in the Southeast paid out about \$1 in damage claims for every \$3 it received for hauling the new varieties of melons in 1955.

So, in the short-run the railroads will benefit by having the amount of claim payments reduced. In the long-run, however, producers, people who market melons, and consumers stand to gain.

Why?

Present carrying rates are based on high-damage incidence. If the amount of damage is reduced, the rates would change accordingly. But if the excessive damage to melons cannot be reduced, it very well could result in higher rail rates. And if these rates were increased, truckers could also increase rates without hurting their competitive position.

Farmers and consumers would carry the burden of these increases. The farmer would receive a smaller share of the consumer's dollar spent for melons. And

the consumer would have to pay more for melons.

Higher prices to consumers would tend to restrict their purchases of melons — with consequent loss to farmers, transportation agencies, wholesalers and retailers of watermelons, and consumers themselves.

Railroads could find themselves in a position where they would have to take some action to move the melon traffic from their roads unless watermelons were loaded crosswise. Although trucks might carry the melon volume, many shippers prefer the railroads because of their in-transit reconsignment and diversion privileges. These let the shippers divert their cars in transit to markets where better prices prevail, so that the shippers can get better returns for their melons.

In the larger markets, many wholesalers sell and distribute right from the railroad team tracks. Shippers and producers would be deprived of these valuable services if railroads did not carry melons. It would also seriously disrupt the established marketing system for the melons. This would mean a loss to all engaged in the production, transportation, and marketing of the watermelons.

The crosswise load will not only increase the efficiency and reduce the costs of marketing melons — it will help to maintain the good quality of watermelons.

Everyone concerned benefits — the farmer, shipper, carrier, wholesaler, retailer, and consumer. This is just one case where the benefits of marketing research will be distributed among all. There are many others.

AGRICULTURAL MARKETING has reported on some of them in earlier issues. Future issues of this publication will continue to report on savings in the costs of various marketing operations that have been brought about through marketing research.



Portable equipment allows harvesting, grading, and packing of celery in the field. Machine cost about \$25,000.

ACREAGE-MARKETING GUIDES

By Donald S. Kuryloski

When the homemaker does her weekly marketing, she finds a vast variety of processed and fresh vegetables in the markets — not just in the summer but all through the year. Most people take for granted this variety and abundance. Few realize the complexity of the industry which furnishes these supplies.

Vegetables are produced commercially in every State of the Union and somewhere in the United States in every season of the year. When and where this production takes place depends upon the climate.

A major portion of vegetables for commercial processing is grown during the summer months. Therefore, in a relatively brief period farmers must produce, and processors must pack, enough vegetables to satisfy consumer needs throughout the following season.

Sources of supplies of fresh vegetables are in an almost constant state of flux, shifting rapidly with the seasons.

The marketing year for fresh vegetables begins in the winter with Florida, Texas, Arizona, and California as the chief suppliers. During the spring and summer months, sources of supplies move northward. When the first fall frosts halt production in the northern States, the pattern is reversed. The southern States again become the dominant sources of fresh vegetables.

Contributing to the complexity of the industry is the

relatively small operation of the individual farmer. For example, data show that 57,000 farms produced green beans for fresh market or processing in 1954 with an average of 4.9 acres of beans per farm. Each grower adds only a small quantity to the total supply of vegetables available at any one time.

Even though the individual vegetable producer's enterprise generally is small, the relative investment is high. Vegetables always require intensive cultivation. Also, because of their perishable nature, vegetables must be harvested and handled with speed and care.

Thus, the production of vegetables is not an enterprise a farmer can consider lightly. The competition is strong and widespread. If he expects to make a profit, the vegetable grower must plan ahead.

To help him meet consumer demands yet not overproduce, the Fruit and Vegetable Division of Agricultural Marketing Service three times a year issues Acreage-Marketing Guides. These give the farmer the best information possible about the probable needed production of each vegetable during the coming season.

Guides are developed for vegetables to be marketed in fresh form and for those to be utilized for processing, as well as for potatoes and sweetpotatoes.

Sometime this month or early in February, the Department will publish the third of its Acreage-Market-

ing Guides for Vegetables for the 1957 crop year. It will contain information for summer and fall fresh vegetables, vegetables for processing, and sweetpotatoes. The guides for summer and fall potatoes also will be published at this time.

A similar publication for winter vegetables was issued last August; another for spring vegetables came out in November.

These USDA guides develop for the vegetable industry the same kind of basic planning that every big, successful industry undertakes. They set up a plan to gear production to a volume that can be marketed profitably.

Compliance with the suggested acreage guides is up to the individual. But if the growers as a whole accept the program and if weather conditions are normal, few marketing difficulties should be encountered.

The acreage-guides program presents to the growers the expert advice of many agricultural specialists who follow the commodity markets closely.

All the latest and best available information about the commodities is gathered together and considered along with forecasts of economic conditions. Attention is also given to such factors as foreign competition, supplies of competing canned and frozen vegetables, supplies of production and marketing materials, and the transportation and labor situations.

From all this material, agricultural experts make specific recommendations for each commodity.

In the acreage-guides bulletin, they explain the reasons for these suggestions. They point out trends that seem to be developing in the marketing pattern of particular vegetables. And they carefully consider any abnormalities of preceding seasons.

However, recommendations for the coming year are,

Celery is but one of the vegetables covered in USDA acreage-marketing guides each year.



of necessity, based on the assumption that average weather conditions and average yields will prevail.

The volume that can be expected to be marketed profitably is presented in terms of a percentage change from the planted acreage of the preceding year. Each individual grower can then apply the percentage change in acreage to his own operation.

The USDA supplies these recommendations in plenty of time for the grower to consider these percentage changes as he develops his plans for the forthcoming season. This allows him to make more intelligent decisions for his and the industry's best interest.

Vegetable crop acreage-marketing guides are distributed through the State extension services.

Requests may also be addressed to Agricultural Marketing Service, U. S. Department of Agriculture, Washington 25, D. C.



Unloading crates of celery as they come from the Florida fields.



Produce salesmen keep in contact with terminal market by phone.

NAMO MEETING IN BOSTON

By Don E. Wilkinson

Boston's Home Savings Bank is one of those banks that under law cannot make loans to farmers. But when representatives of 37 States attended the 37th annual meeting of the National Association of Marketing Officials in Boston in October, they found this bank's windows stopping passersby with an attractive display of farm products.

"We don't do a lot of business with farmers," Parker O. Bullard, assistant treasurer of the bank, told the NAMO meeting. "But we believe that agriculture is important in our general economy and important to the people with whom we do business."

The NAMO group, composed of representatives of State departments and commissions of agriculture, met for three days in Boston, then traveled by bus and motorcade to Portland, Me., for its concluding business meeting.

In Portland the group elected George H. Chick of Maine president for the coming year; Frank W. Risher of Florida, first vice president; and W. A. Wunsch of New Mexico, second vice president. Don E. Wilkinson of Wisconsin was re-elected secretary-treasurer, and Wesley Windisch of Ohio, outgoing president, and J. R. Foote of Arizona were named executive committee members at large.

In the annual president's message to the association, Mr. Windisch stressed quality marketing as the aim of NAMO research and marketing programs. He admitted that incorporating convenience and quality into the marketing process costs money. But he felt that these modern techniques have increased consumption.

Mr. Windisch made special reference to the trends in poultry marketing, to the distinct changes in marketing eggs. He also mentioned the forward strides by the transportation and refrigeration industries which have contributed significantly.

Speaking at the annual banquet held in Boston's Parker House was John H. Davis, Moffet Professor of Economics at Harvard Business School and former president of the Commodity Credit Corporation. His

subject was "Agribusiness — A New Look at Agriculture."

Agribusiness, as Professor Davis refers to it, constitutes 35 to 40 percent of our whole economy. It not only encompasses every person on the farm engaged in production, but all those providing the marketing services of assembly, processing, distributing, and so forth.

Professor Davis noted, however, that while we have gone way ahead in production, we have lagged in marketing. He said marketing lacks the resiliency to absorb the shock of oversupply.

Professor Davis predicted that the United States is probably facing a period during which surpluses will continue to build up. He said the nation's production potential is greater than most people think.

Participating in a panel discussion titled "A Close Look at Our RMA Projects" were Don Wilkinson, F. W. Risher, F. C. Gaylord of Indiana, and John Mahoney of Maryland.

Robert W. Cherry, assistant market administrator at Boston, discussed federal milk marketing orders. Walter C. McKain, Jr., head of the Department of Rural Sociology at the University of Connecticut, spoke on "Our Older Population — A Potential Market for Milk and Eggs."

Apples were discussed by Walter E. Piper, chief market investigator, Massachusetts Department of Agriculture; Warren W. Oley of New Jersey; Davis Foreman of Illinois; and Paul T. Rowell of Oregon.

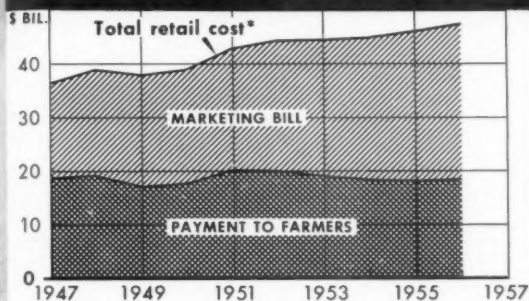
W. C. Hackleman of the U. S. Department of Agriculture presented an illustrated discussion of produce markets abroad, while Stanton Davis, president of the Brockton Public Market and treasurer of the National Association of Supermarket Operators, discussed trends in supermarket self-service.

Also appearing on the program were Richard Preston, Commissioner of the Massachusetts State Department of Commerce; Carleton I. Pickett, secretary-treasurer of the Massachusetts Farm Bureau Federation; and Spencer G. Duncan, assistant director of New York's Bureau of Markets.

Trends in Marketing Costs

By Kenneth E. Ogren and Forrest E. Scott

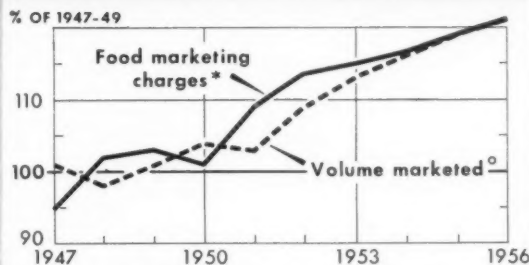
FARM RECEIPTS LAG AS MARKETING BILL RISES



U. S. DEPARTMENT OF AGRICULTURE

REG. 2567-56 (10) AGRICULTURAL MARKETING SERVICE

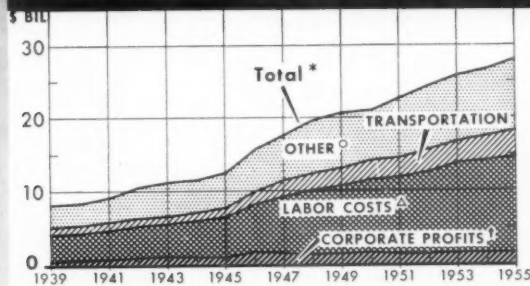
VOLUME MARKETED AND CHARGES PER UNIT RISE



U. S. DEPARTMENT OF AGRICULTURE

REG. 1639-56 (10) AGRICULTURAL MARKETING SERVICE

MOST ITEMS IN MARKETING BILL INCREASE



U. S. DEPARTMENT OF AGRICULTURE

REG. 3371-56 (17) AGRICULTURAL MARKETING SERVICE

The bill for marketing farm produced food products rose steadily from \$17,800,000,000 in 1947 to \$29,000,000,000 in 1956. But the gross returns farmers received from these products were about the same in both years. After reaching a peak of \$20,200,000,000 in 1951, total payments to farmers declined steadily to \$18,200,000,000 in 1955, but rose slightly in 1956.

Rising charges per unit of product, an expanding volume of products, and increases in marketing services per unit accounted for the increase in the marketing bill. Unit marketing charges and volume marketed have each increased 21 percent since 1947-49.

Labor costs made up 47 percent of the marketing bill in 1955, transportation charges 13 percent, corporation profits about 6, and "other costs and profits" 34 percent. Each of these elements in the marketing bill more than tripled between 1939 and 1955.

The Longer Term Outlook

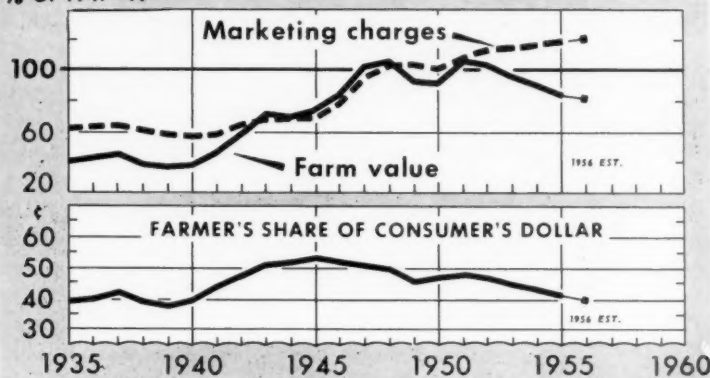
The outlook for marketing costs in the coming year is a continuation of the steady rise of recent years. On the basis of past experience and present economic indications, no early reversal of this trend can be foreseen.

With respect to the longer term outlook for marketing costs, the following projections seem likely:

1. Services performed by the marketing system in getting products from the farm to the consumer in the time, form, and place desired will increase relative to services performed by farmers in producing the raw materials needed.
2. The number of workers employed in the processing and distribution of farm products, as well as the total resources used by marketing firms, will increase relative to workers and resources in agriculture.
3. The total costs for processing and distributing farm products will increase relative to agricultural production costs. Or, stated in more familiar terms, marketing costs will make up an increasing share of the consumer's dollar.

DECLINE IN FARMER'S SHARE OF FOOD DOLLAR SLOWS DOWN

% OF 1947-49



DATA ARE FOR MARKET BASKET OF FARM FOODS BASED ON AV. 1952 PURCHASES BY URBAN FAMILIES

U. S. DEPARTMENT OF AGRICULTURE

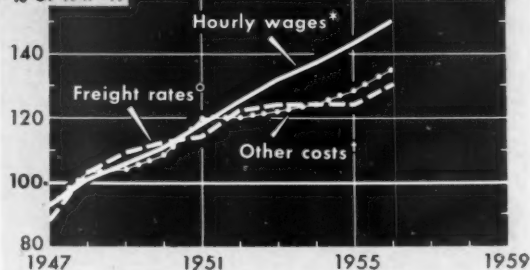
REG. 1424A-56 (10) AGRICULTURAL MARKETING SERVICE

The farmer's share of the food dollar will probably average 40 cents for 1956, 1 percent less than 1955. The farmer's share during 1957 perhaps will not be much different than the average for 1956.

Unit marketing charges rose mainly because of increases in wage rates, transportation charges, and other operating costs. Marketing charges probably will increase next year.

COSTS OF FOOD MARKETING FIRMS CONTINUE UP

% OF 1947-49



* AVERAGE HOURLY EARNINGS IN FOOD PROCESSING, WHOLESALE AND RETAIL TRADE

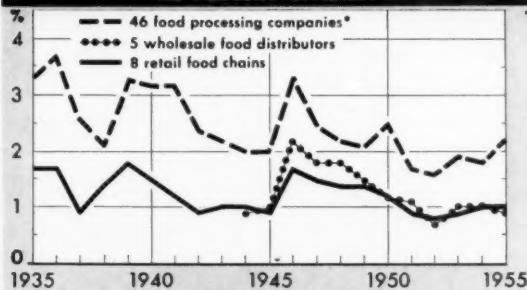
• RAILROAD FREIGHT RATES FOR FARM PRODUCTS

• FUEL AND POWER, PACKAGING MATERIALS AND CONTAINERS, MACHINERY AND MOTIVE PRODUCTS, ETC.

U. S. DEPARTMENT OF AGRICULTURE

REG. 5610-56 (10) AGRICULTURAL MARKETING SERVICE

FOOD MARKETING CORPORATIONS' PROFITS AS PERCENT OF SALES



NET PROFITS LESS TAXES ON INCOME

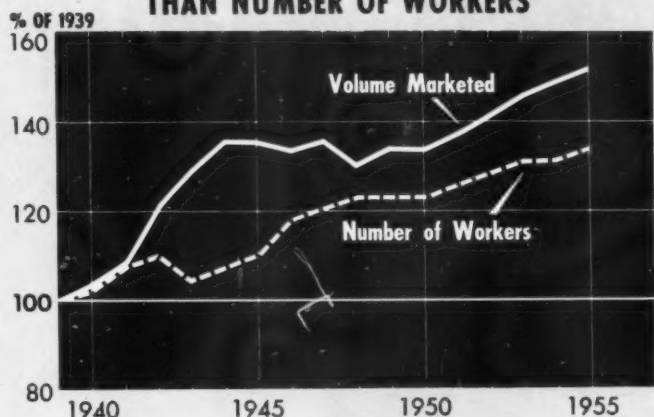
* 11 MEAT PACKING COMPANIES, 15 DAIRY PRODUCTS COMPANIES, 7 BAKING COMPANIES, 4 CANNING COMPANIES, 4 GRAIN MILLING COMPANIES, AND 10 MISCELLANEOUS FOOD PRODUCTS COMPANIES

U. S. DEPARTMENT OF AGRICULTURE

REG. 1993-56 (10) AGRICULTURAL MARKETING SERVICE

Average net profits (after taxes) per dollar of sales of the leading food processing and distributing companies have been relatively stable in recent years and generally have been lower than in 1935-39. But profits per unit of product have been higher than in the prewar period.

VOLUME OF FOOD MARKETED UP MORE THAN NUMBER OF WORKERS



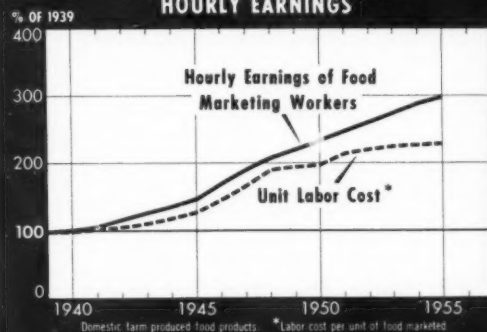
U.S. DEPARTMENT OF AGRICULTURE

AMS REG. 2544-56 (7)

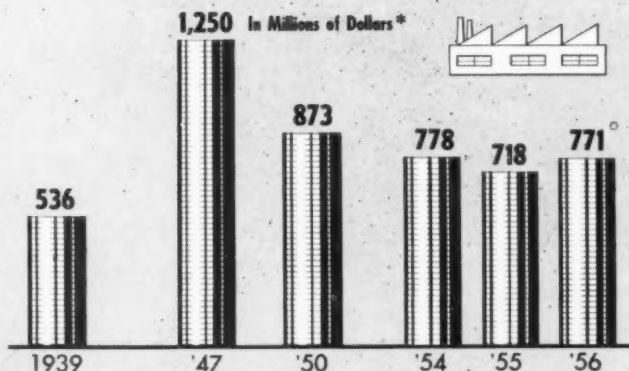
By improving efficiency in performing some marketing services and eliminating others, the marketing system has handled an expanding volume of products without a comparable increase in workers.

Because of the increase in the volume of products handled per worker, labor costs per unit of product have not risen as much as the worker's average hourly earnings.

LABOR COST RISES LESS THAN HOURLY EARNINGS



BIG INVESTMENTS IN FOOD PROCESSING FACILITIES BOOST PRODUCTIVITY



* Estimates in 1955 dollars (except that for 1956) derived from Dept. of Commerce and Securities and Exchange Commission data.

□ Preliminary

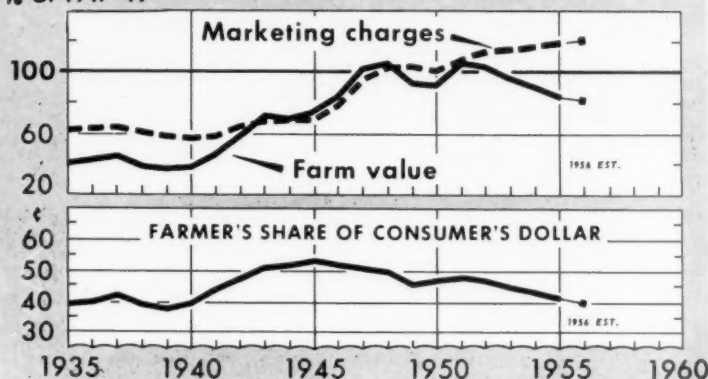
U.S. DEPARTMENT OF AGRICULTURE

AMS REG. 2542-56 (7)

During recent years, food marketing firms made large investments in processing plants and equipment, warehouses, retail stores, and other facilities.

DECLINE IN FARMER'S SHARE OF FOOD DOLLAR SLOWS DOWN

% OF 1947-49



DATA ARE FOR MARKET BASKET OF FARM FOODS BASED ON AV. 1952 PURCHASES BY URBAN FAMILIES

U. S. DEPARTMENT OF AGRICULTURE

NEG. 1424A-56 (10) AGRICULTURAL MARKETING SERVICE

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COSTS OF FOOD MARKETING FIRMS CONTINUE UP

% OF 1947-49



* AVERAGE HOURLY EARNINGS IN FOOD PROCESSING, WHOLESALE AND RETAIL TRADE

† RAILROAD FREIGHT RATES FOR FARM PRODUCTS

‡ FUEL AND POWER, PACKAGING MATERIALS AND CONTAINERS, MACHINERY AND MOTIVE PRODUCTS, ETC.

U. S. DEPARTMENT OF AGRICULTURE

NEG. 5610-56 (10) AGRICULTURAL MARKETING SERVICE

FOOD MARKETING CORPORATIONS' PROFITS AS PERCENT OF SALES



NET PROFITS LESS TAXES ON INCOME

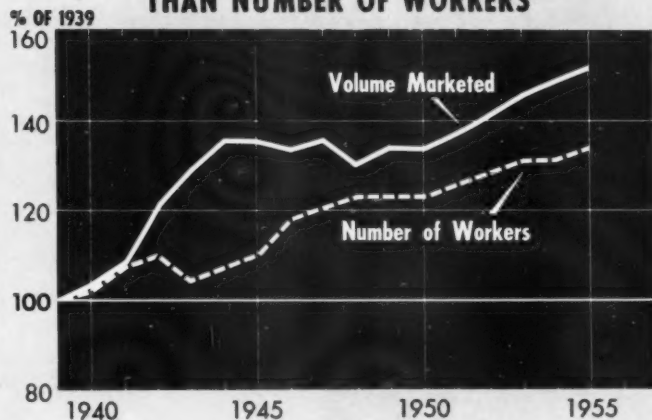
* 11 MEAT PACKING COMPANIES, 15 DAIRY PRODUCTS COMPANIES, 7 BAKING COMPANIES, 4 CANNING COMPANIES, 4 GRAIN MILLING COMPANIES, AND 10 MISCELLANEOUS FOOD PRODUCTS COMPANIES

U. S. DEPARTMENT OF AGRICULTURE

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VOLUME OF FOOD MARKETED UP MORE THAN NUMBER OF WORKERS



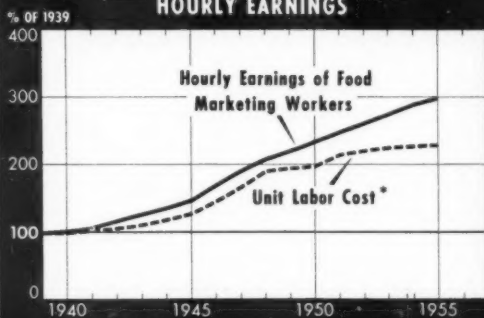
U.S. DEPARTMENT OF AGRICULTURE

AMS NEG. 3544-56 (7)

By improving efficiency in performing some marketing services and eliminating others, the marketing system has handled an expanding volume of products without a comparable increase in workers.

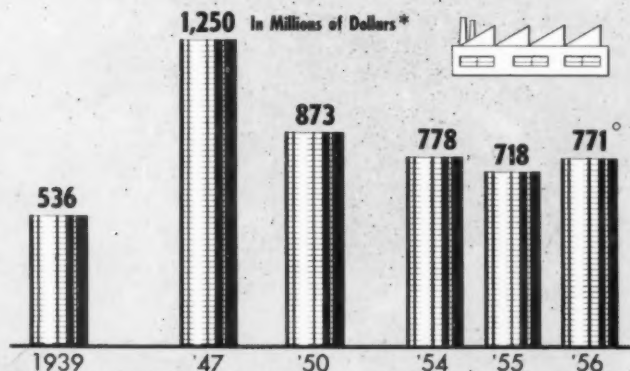
Because of the increase in the volume of products handled per worker, labor costs per unit of product have not risen as much as the worker's average hourly earnings.

LABOR COST RISES LESS THAN HOURLY EARNINGS



Domestic farm-produced food products. * Labor cost per unit of food marketed.

BIG INVESTMENTS IN FOOD PROCESSING FACILITIES BOOST PRODUCTIVITY



* Estimates in 1955 dollars (except that for 1956) derived from Dept. of Commerce and Securities and Exchange Commission data.

° Preliminary

U.S. DEPARTMENT OF AGRICULTURE

AMS NEG. 3542-56 (7)

During recent years, food marketing firms made large investments in processing plants and equipment, warehouses, retail stores, and other facilities.

NUMBER OF GROCERY STORES DECLINES



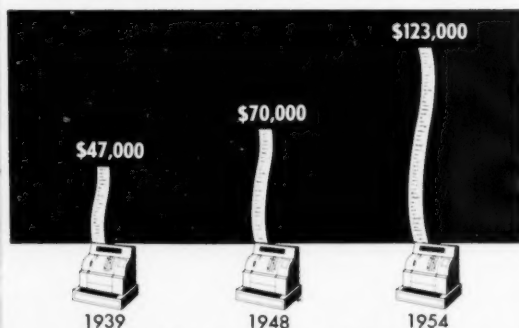
U. S. Department of Commerce, Bureau of the Census.

U.S. DEPARTMENT OF AGRICULTURE

AMS NEG. 3540-56 (9)

Retail food stores are getting larger. In fact, the average size increased so much that despite the large increase in total sales between 1948 and 1954 the number of grocery stores declined more than 20 percent. The number of stores with annual sales of over 1 million dollars more than tripled. These large stores were still less than 2.5 percent of the total number of grocery stores in 1954—6,000 out of 270,000—but they accounted for almost a third of total sales. Average sales per retail store (deflated for price change) increased more than two and one-half times between 1939 and 1954, with a large part of that increase occurring between 1948 and 1954.

SALES PER RETAIL GROCERY STORE INCREASE

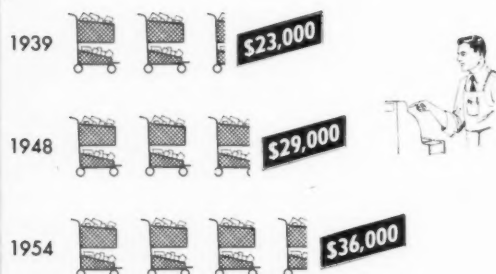


Based on Bureau of the Census data. Sales in terms of 1954 retail food prices.

U.S. DEPARTMENT OF AGRICULTURE

AMS NEG. 3539-56 (9)

SALES PER WORKER UP IN GROCERY STORES



Based on Bureau of the Census data. Sales in terms of 1954 retail food prices.

U.S. DEPARTMENT OF AGRICULTURE

AMS NEG. 3541-56 (9)

MARKETING and REGULATORY PROGRAMS

An efficient marketing system must move a large quantity of products rapidly from producer to consumer and aid farmers in obtaining fair prices for their commodities.

To help achieve this efficiency, the Agricultural Marketing Service administers a number of regulatory programs, marketing agreements and orders, and marketing services authorized by various legislative acts. The following summary of these programs indicates the progress that has been made in improving the Nation's marketing services for farm products.

Milk Marketing Orders. The milk that goes on the tables of over half of the urban population of this country is marketed under the terms of Federal milk marketing orders. Sixty-eight of these orders are now in effect—most of them in the eastern half of the United States. Under these orders more than 190,000 producers sent 30 billion pounds of milk to market during the past year.

Five new orders went into effect in 1956. They were for the Texas Panhandle, Inland Empire (Washington and Idaho), Wilmington, Del., Chattanooga, Tenn., and Bluefield, W. Va.

Perishable Agricultural Commodities Act. The number of licenses in effect under the PAC Act is the largest on record. A tabulation made in September, 1956, showed 26,932.

Packers and Stockyards Act. More stockyards are now posted under the P & S Act than ever before—367 as of November 20, 1956. Of the 4,213 dealers under the Act, 2,367 were packer buyers. In addition, 1,680 market agencies of various types—principally commission buyers and sellers—were registered.

As of November 20, 1956, poultry dealers and commission firms licensed under the Act numbered 1,262.

U. S. Warehouse Act. The number of warehouses licensed under this Act as of November 16, 1956, was 1,655—74 more than a year ago. Of this total, 1,052 were grain warehouses and 533 cotton warehouses.

Market News Service. Through a Nation-wide system of 159 field offices, most of which are connected by 11,000 miles of leased wire facilities, AMS gathers and distributes market news on supply, demand, quality, prices and movement of agricultural products.

This timely, accurate, unbiased service was started 41 years ago to help place producers and others dealing in agricultural commodities on an equal bargaining basis. Dissemination to the public is through free mail reports, newspapers, wire news services, radio, television, telephone, and by personal contact.

More radio and television stations than ever before are now broadcasting Federal or Federal-State farm market news regularly. Radio stations carrying such information totaled 1,461, an increase of 150 stations since 1954, the year of the last survey. A total of 149 television stations now feature farm market news regularly as compared with 82 stations in 1954.

Grades and Standards for Farm Products. Official U.S. grades—some mandatory, some permissive—have been developed to provide a common language through which producers, dealers, and consumers, frequently located at distant points, may deal with confidence in their transactions.

Since they are so essential to efficient marketing, grades are formulated only after comprehensive research through the various stages of marketing. The 380-odd grades now in effect are under constant scrutiny in order to keep them current with all the changes which occur in the production of, and marketing practices for, the individual commodities.

USDA Poultry Inspection Service. Total poundage (ready-to-cook weight) eviscerated under Federal inspection through September of 1956 was 838,655,000 as compared with 577,644,000 pounds for a similar period last year. As of November 26, 1956, 314 processing plants were using the service.

Cotton Classing. On October 26, 1956, the scope of this service had increased by 52 percent over a year ago. Some of this increase could be attributed to earlier harvesting in 1956. However, the increase in classing was by a margin of 3.5 million bales—10.2 million classed this year, 6.7 million last year.

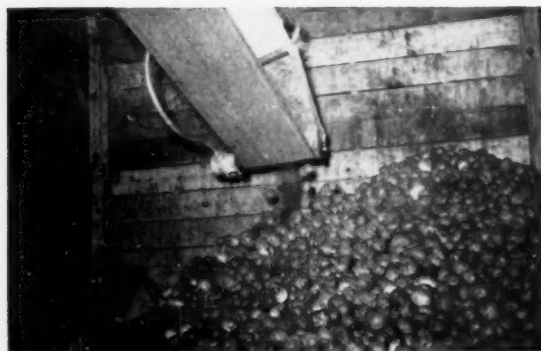
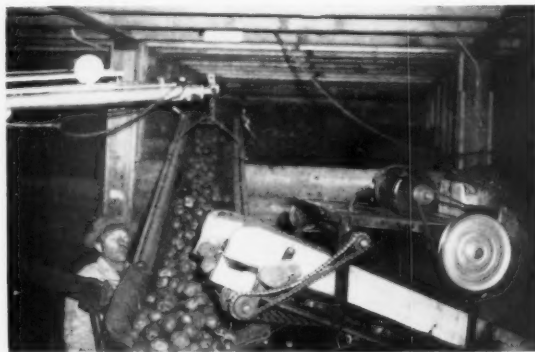
POTATO BELT CONVEYOR

By Richard S. Claycomb

1. This pilot model potato conveyor, designed by Agricultural Marketing Service personnel at East Grand Forks, Minn., is lightweight and versatile. It places potatoes in bins anywhere from 11 feet below floor level to 7 feet above.



2. Built around a spine of high-strength steel tubing, it weighs only 15 pounds per foot as compared to 30 to 50 pounds for other models. Lightweight ribs of small channel steel support the plywood trough, 2-ply belt, and the load.



3. Weight was further reduced by using fluid motor drive. However, the motors on the test model were not powerful enough to haul the loaded conveyor belt up an incline of 20°. Some modifications will be made to reduce the friction between the belt and the plywood base. This should solve the problem.



4. A strip of canvas was draped over the potatoes to keep them from rolling violently when the conveyor was used at a steep downward slope. As the bin filled and the slope reduced, the canvas was no longer needed. Researchers plan to further develop and test the model during the next season.

